

15. PURPLE SUNBIRD *NECTARINIA ASIATICA* (LATHAM) — A NEW PEST OF GRAPES UNDER AGROCLIMATIC CONDITIONS OF HISSAR, HARYANA

Grape (*Vitis vinifera* L.) is one of the most popular commercial fruit crops in India. The commercial cultivation of this crop in Haryana State is mainly confined to its southwestern districts i.e. Hissar, Fatehabad, Sirsa and Bhiwani. Many birds such as the Indian myna *Acridotheres tristis* (Linn.), redvented bulbul *Pycnonotus cafer* (Linn.) and house crow *Corvus splendens* Vieillot cause extensive damage to the ripening grapes (Pandey and Pandey, 1990). The purple sunbird *Nectarinia asiatica* Latham (Passeriformes : Nectarinidae) has recently been found damaging ripe grapes in the experimental vineyard of the Dept. of Horticulture, Haryana Agricultural University and other vineyards of Hissar dist. *N. asiatica* is a tiny, sexually dimorphic bird. The male in non-breeding plumage looks like the female — brown to olive brown from above, pale dull yellow below but with darker wings and a broad black stripe running down the middle of its breast. Its slender, curved bill and tubular tongue are admirably adapted to probe into the flower tube and suck nectar. The purple sunbird is generally found in light deciduous or dry thorn forest, gardens and compounds where it feeds on flower nectar besides small insects and spiders etc. (Ali, 1979).

During summer months Hissar dist. generally experiences a continuous spell of dry heat, which is coupled with dust storms. The maximum temperature fluctuates from 40-47°C, minimum from 25-30°C. Relative Humidity is as low as 25-35%. During these months, very few nectar producing plants are in flower in the area. The grapes start ripening during late May

to the end of June. This period coincides with the dearth period of nectar for this bird.

A change in the feeding habit is observed during these months. Since the juice of grape contains the monosaccharides fructose and glucose and is comparable with the nectar of many flora, it appears to have attracted sunbirds towards the grape crop. During the dearth period, the purple sunbird frequents grape vineyards in search of the sweet juice and has been observed in remote areas where there is no other flora, exhibiting locally migratory behaviour.

Preliminary study shows that fruit damage by the purple sunbird ranges between 2-20%. This bird is a primary pest as it penetrates the ripening berries and sucks the grape juice. However, fruitfly (*Drosophila melanogaster*) and honey bees (*Apis* spp) attack the punctured berries later on, which results in rotting of the fruit. The whole bunch is thus rendered unfit for human consumption, causing economic loss to the growers. The attack of sunbird has also been observed on vineyards which were protected with nylon nets from birds like the bank myna, bulbul etc. The small size of the bird helps it to move across the net. The purple sunbird has not been reported as a pest of grapes under Haryana agroclimatic conditions prior to this publication.

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